

ProMD - Element Management System (EMS)

Comprehensive Software Tool for Network Element Monitoring

The ProMD EMS system provides real time monitoring and troubleshooting of network elements for media network deployments.

KEY FUNCTIONS:

- Operational Monitoring of Media Networks
- Centralized Server/Client Architecture with Redundancy
- Web Booking Portal
- XML Scripting Engine for Device Modeling
- Alarm & Trap Management
- Customizable GUI
- Quick Implementation and Integration of New Devices
- Quick First-Time Set-up
- Quick Provisioning for Future Planning

APPLICATIONS:

- Carrier Class Media Delivery Networks
- High Performance Studio Interconnects
- Flawless Contribution Video Transport
- Contribution Video over Terrestrial and Satellite Networks

ProMD EMS provides a graphical overview of all the elements and their status within a network. Its main focus is to provide operators with an easy to understand display, allowing rapid corrective action in the event of possible issues/alarms with a clear definition of different devices and their service purpose (such as video transmission).

CENTRALIZED SERVER/CLIENT SYSTEM WITH REDUNDANCY

ProMD EMS consists of a server (ComManager) and an easy to use GUI client component (NetManager). The server component manages and stores the complete network information as well as system setups and queues all tasks initiated by the clients. This guarantees that all administrators and operators have synchronized and updated information at all times from any location while ensuring tasks not to collide.

Dividing the network management software into server and client components, the control network and transmission network are separated from each other completely securing the broadcast network environment. The server/client architecture provides for robust and secure element management in complex corporate environments. Any number of clients can be connected to the server giving full flexibility in team scalability.



ProMD Element Management System (EMS)

FLEXIBLE ARCHITECTURE DESIGN

ProMD EMS is based on a flexible XML architecture that allows for a highly customizable user interface and modeling of network elements. ProMD EMS comes with a user friendly XML modeling language and interpreter for the integration of new device types, new modules and for an individual composition of the user interface. All variables of a device can easily and flexibly be integrated or modified within the ProMD EMS GUI. The powerful integration scripts and macro capability enables the end user to uniquely customize the application for their own special purpose.

The ProMD EMS modules can be modeled into a tailored GUI for a concise and simple to understand view of the equipment, modules and services.

ProMD full integration and network modeling services for design and implementation of user interfaces to exact customer requirements are available as options.

QUICK IMPLEMENTATION OF NEW DEVICES

Professional Broadcast equipment and Network elements can be integrated into the software using the provided XML scripting engine. Network elements can be implemented into the ProMD EMS through the use of the generic network model or through a comprehensive device module.

BE ON TOP OF YOUR NETWORK

The well-arranged topology view enables operators to get a quick and complete overview of their entire network at all times. Devices are arranged on a geographical map showing network links, availability and issues occurring on devices and the network at a glance by coloring and symbols. The system has drill-down capability with unique system linking between alarms, systems, cards, and services.

INTEGRATE THE WHOLE STAFF

Different tasks require different views and access rights to the network and its management systems. ProMD EMS comes with a flexible, centralized user management and authorization functionality that allows the sophisticated definition of users or user groups required for each task. Each staff member achieves his personalized view and access to the system.

QUICK FIRST TIME SETUP

ProMD EMS allows a fast initial setup of the software in a given network infrastructure by its automatic device discovery functionality. No more time consuming manual device integration.

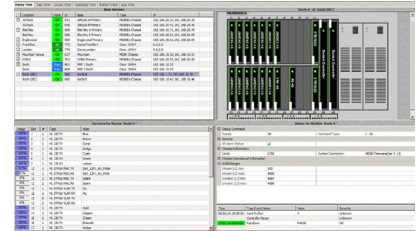
QUICK PROVISIONING OR FUTURE PLANNING

Ad hoc provisioning or connection scheduling: choose which works best for forthcoming services. ProMD EMS offers the possibility to quickly provision and add ad hoc services. In addition to ad hoc, the scheduling module takes care of managing and planning of future services with its comprehensive calendar and traffic control module. The provisioning process automatically finds available modules, network trunk modules, and even network paths for the user to speed up the daily work in network management.

GRAPHICAL USER INTERFACE

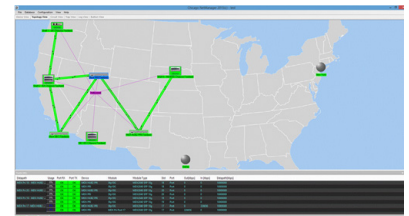
DEVICE VIEW

- Status of all equipment deployed in the network
- Simplified graphical front view of each device including module related information
- Easy module configuration interface
- Status of module related services



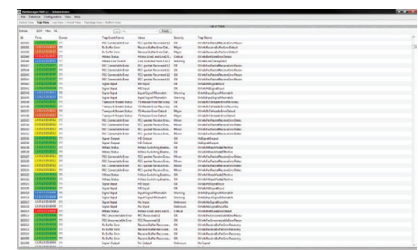
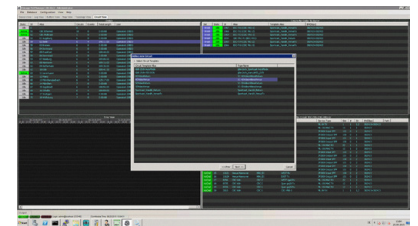
TOPOLOGY VIEW

- Graphical network overview with zoom and pan. The background can be filled with a geographical map or system diagram relating to customer or network specifics
- Errors, warnings and system usage shown with different colors, icons and graphical elements
- Errors in topology view are linked to drill-down for detail views
- Freely configurable icons and network maps flexibility



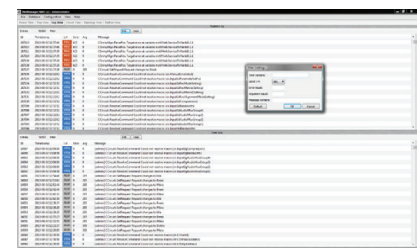
CIRCUIT & SCHEDULER VIEW

- List of orders for grouping configured circuits
- List of all configured circuits
- Allows the intuitive creation and modification of circuits and circuit templates (preconfigured connection profiles)
- Management of scheduled circuits / orders
- List of all services of a circuit including status display containing actual state and actual commands
- Easy circuit switching
- Time bar view for overview of scheduled circuits



TRAP VIEW

- List of all incoming traps, including detail information
- Severity coloring of traps
- Filtering of traps
- Trap event overview (user defined trap groups for quick fault finding)

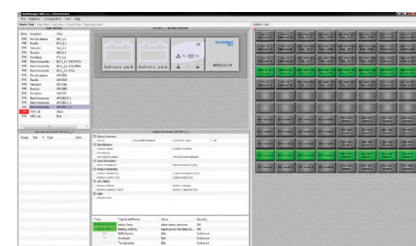


LOG VIEW

- Log view is separated to System Log and User Log
- Track all Software connected issues
- Track System Users
- Comprehensive Filtering System to enhance usability

BUTTON PANEL

- Quick enable / disable of circuits or circuit groups
- Button panel can be live linked to a hardware switch panel



FOLLOWING MODULES ARE AVAILABLE AND CAN BE ADAPTED TO INDIVIDUAL REQUIREMENTS

BASIC NMS

- Server Component (ComModule)
- Client Component (NetManager) including Device View, Topology View and Circuit View
- Trap Collector and interpreter with severity mapping
- Network Status View including topology view with device and Link Status
- Alarm handling and logging with filtering option
- Ad hoc connection provisioning
- System & database configuration
- User authentication, authorization, and accounting
- XML and macro interpreter for easy application customizing, device integration and modification
- Automatic network device scan
- Database backup functionality
- Import / export interface for logs, inventories, topology and configurations
- Device Driver for equipment based on SNMP or other open management protocols

CONNECTION HANDLING

- Manual or automatic network route finding
- Automatic resource handling
- Pre-defined connection profiles for all sorts of services

AD-HOC CONNECTIONS

- Pre-defined end-to-end connections easily to be started via shortcuts
- External Switching Panel available

SCHEDULING MODULE

- Connection planning and scheduling
- Planned, automatic provisioning and de-provisioning
- Traffic control module takes care of resource management
- Connection Calendar

NORTH BOUND INTERFACE

- External connection NBI module for query and control of EMS functionalities and data
- Real-time control and log for external communications flow
- Scheduled connection orders (customer driven module for ordering scheduled services)
- Event View & History Log

H/W REDUNDANCY PACKAGE

- Server components and database stay in sync on redundant hardware
- Automatic failover protection switchover

ORDERING INFORMATION

ProMD Basic EMS Network Management System	North Bound Interface
Scheduling Module	Hardware Redundancy Package

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